

CHERTIN, A. M.

AUTHOR: ^{P. 2} Yevseyev, A. A., Engineer

SOV/ 105-58-7-21/32

TITLE: Conference on Developmental Problems of the Production of Transformers in the USSR (Soveshchaniye po voprosam razvitiya otechestvennogo transformatorostroyeniya)

PERIODICAL: Elektrichestvo, 1958, Nr 7, pp. 82 - 83 (USSR)

ABSTRACT: The conference took place from March 5th to March 6th, 1958, in Moscow. It was called by State Scientific Technical Committee Attached to the Council of Ministers of the USSR (Gosudarstvennyy nauchno-tekhnicheskiy komitet Soveta Ministrov SSSR) together with the Gosplan USSR (Gosplan SSSR). This conference was attended by: scientists and engineers from Moscow, Leningrad, Kiyev, Khar'kov, Sverdlovsk, Alma-Ata, and other cities, representatives of the Sovnarkhozes, the Technical Office Attached to the Ministry of Electric Power Plants, of the Building Authorities RSFSR, of the Gosstroy USSR, of the Committee of Standards, of the Electric Installation Organisations, and by the co-workers of the transformer works Moscow, Zaporozh'ye, "Uralelektroapparat", Armelektrozavod, as well as by the All Union Scientific Research-and Planning Institutes VEI, VTI, GIDEP, VNIChermet, VNIIE, MEI and

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Conference on the Developmental Problems of the
Production of Transformers in the USSR

SOV/105-58-7-21/32

others. The representatives of organisations which have transformers in operation were invited as well. Professor I.A. Syromyatnikov (GNTK SSSR) opened the conference and pointed out the shortcomings and objectives in the production of transformers. The Deputy Chief Constructor A.M. Chertin, Moscow Transformer Works imeni Kuybyshev (Moskovskiy transformatornyy zavod im. Kuybysheva) reported on the working out of plans for the new series of the 110 kW transformers in the case of which the total losses are lower by 30%, and the idling losses by 40% - 50%, compared with the GOST 401-41. In 1959 these transformers will be put in operation to a large degree. Chief Engineer I.A. Antonov, Zaporozh'ye Transformer Works (Zaporozhskiy transformatornyy zavod) reported on the new series of transformers with a power of 560 - 5600 kVA at 10 and 35 kV, 7,5 - 31,5 MVA at 35 kV, 90 - 240 MVA at 110 kV, 90 - 240 MVA at 220 kV, 15 - 60 MVA at 150 kV and on the series of autotransformers 220/110/HH with 120 - 300 MVA for monophasic units and 180 - 450 MVA for three-phase units. Chief Engineer A.N. Dolgov (Trust "Tsentronelektroset'stroy" MES) spoke about practical experience gained in assembling transformers and autotransformers with high power

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ALEKSENKO, G.V.; SYROMYATNIKOV, I.A.; NEKRASOV, A.M.; KRIKUNCHIK, A.B.;
RABINOVICH, S.I.; CHUSOV, P.P.; ~~CHERTIN, A.M.~~; BULGAKOV, N.I.;
BRITCHUK, V.V.; MAN'KIN, E.A.; PANOV, A.V.; SAPOZHNIKOV, A.V.;
SAGALOV, M.I.; VOYEVODIN, I.D.; ANTONOV, I.A.;
KALINICHENKO, I.S.; KRAYZ, A.G.

L.M. Shnitser; on his 75th birthday. Elektrichestvo no.11:87-
88 N '63. (MIRA 16:11)

L 22594-66 EWT(d)/EWP(k)/ENP(1)

ACC NR: AP6012999

SOURCE CODE: UR/0105/65/000/006/0090/0090

AUTHOR: Alekseyenko, G. V.; Borisenko, N. I.; Vovodin, I. D.; Drozdov, N. G.; Krayz, A. G.; Man'kin, E. A.; Mayorets, A. I.; Nekrasov, A. M.; Nayashkov, I. S.; Pavlenko, A. S.; Rokotyan, S. S.; Sobolev, A. A.; Syromyatnikov, I. A.; Sapozhnikov, A. V.; Sarkisov, M. A.; Chernichkin, D. S.; Chertin, A. M.

ORG: none

TITLE: S. I. Rabinovich (on the occasion of his 60th birthday)

SOURCE: Elektrichestvo, no. 6, 1965, 90

TOPIC TAGS: electric engineering personnel, electric transformer, hydroelectric power plant

ABSTRACT: The chief specialist of transformer building of the Gosplan (State Planning Commission) USSR, Samuil Isaakovich Rabinovich was born in 1905 in the town of Borisoglebsk of the Voronezh Oblast'. From his student years at the Gosudarstvennyy elektromashinostroitel'nyy institut (State Machine-Building Institute) he already showed interest for power transformers. In the early thirties he designed the first types of domestic Soviet 110 and 220 kV transformers; in 1939 he became the chief designer of the Moskovskiy transformatornyy zavod (Moscow Transformer factory). In 1946, he conducted the design and construction of lightning-resistant transformers; during 1949-1954,

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UDC: 621.314(092)

L 22594-66

ACC NR: AP6012999

he headed the design of the 400 kV transformer equipment for the Volzhskaya hydroelectric power station - Moscow power line; his subsequent work on the 500 kV equipment earned him the Lenin prize. From 1960, he has been working at the Gosplan USSR. He is also a member of the editorial board of the journal Elektrichestvo (Electricity). Orig. art. has: 1 figure. [JPRS]

SUB CODE: 10, 09 / SUBM DATE: none

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ALEKSEYENKO, G.V.; BORISENKO, N.I.; VOYEVODIN, I.D.; DROZDOV, N.G.; KRAYZ, A.G.;
MAN'KIN, E.A.; MAYORETS, A.I.; NEKRASOV, A.M.; NAYASHKOV, I.S.; PAVLENKO,
A.S.; ROKOTYAN, S.S.; SOBOLEV, A.A.; SYROMYATNIKOV, I.A.; SAPOZHNIKOV,
A.V.; SARKISOV, M.A.; CHERNICHKIN, D.S.; CHERTIN, A.M.

Samuil Isaakovich Rabinovich, 1905; on his 60th birthday. Elektri-
chestvo no.6:90 Je '65. (MIRA 18:7)

SHASKOL'SKIY, B.V., kand. tekhn. nauk; SOTNIKOVA, K.F., inzh.;
GAVRILIN, Ye.F.; LUBKOV, A.N.; SAPOZHNIKOV, V.M.; ZHUCHENKO,
L.F.; CHIGIRINA, N.I., tekhnik; ZHARIKOV, I.P., inzh.;
CHERTISHCHEVA, A.Ye.; SHAPOVALOV, V.K., tekhnik; MOROZOV, A.M.,
inzh.; SLIVKO, S.V., tekhnik; CHERNAVSKIY, G.N., kand. tekhn.
nauk; STRUZHESTRAKH, Ye.I., inzh., ed.; EL'KIND, V.D., tekhn.
red.; DEMKINA, N.F., tekhn. red.

[General norms for time and machining conditions used in the
industry for machining on automatic lathes; mass, large-lot
and lot production] Obshchemashinostroitel'nye normativy vremen
ni i rezhimov rezaniya na tokarno-avtomatnye raboty; massovoe,
krupnoseriynoe i seriynoe proizvodstvo. Moskva, Mashgiz, 1962.
271 p. (MIRA 15:12)

1. Moscow. TSentral'noye byuro promyshlennykh normativov po trudu.
(Turning--Production standards)

CHERTKINA, F. A.; LEVCHENKO, L. A.; SHAYN, YE. S.; SHAPCALOVA, T. V.

"Comparative characteristics of antidiphtheria preparations in
an experiment."

Report submitted at the 13th All-Union Congress of Hygienists,
Epidemiologists and Infectionists. 1959

AFANAS'YEV, N.; SIL'NOV, V., glavnyy inzh.; BACHILOV, I.; ~~CHERTKOV, A.,~~
glavnyy konstruktor; SOKOLOV, Ya.; TRUKHANOVA, A., ~~tekhred.~~

[Trench silo with a capacity of 215 tons; (walls lined with clay reinforced with sticks)] Silosokhranilishche transheynogo tipa emkost'iu 215 tonn (s glinokhvorostianoi oblitsovkoi sten. Proekt no.003. Minsk, Gos.izd-vo BSSR, Red.nauchno-tekhn.lit-ry, 1955. (MIRA 12:4)
2 p.

1. White Russia. Ministerstvo gorodakogo i sel'skogo stroitel'stva.
2. Direktor "Belsel'proyekta" (for Afanas'yev). 3. Rukovoditel' masterskoy No.2 "Belsel'proyekta" (for Bachilov). 4. Ispolnyayushchiy obyazannosti nachal'nika smetnogo sektora "Belsel'proyekta" (for Sokolov). 5. "Belsel'proyekt" (for Sil'nov, Chertkov).
(Silos)

CHERTKO, V.F.; IOFFE, Ya.A.; OBOLENSKIY, K.P.; KRYLOV, P.N.; KUDROV, V.M.; SAM-
BORSKIY, G.I.; KOSTAKOV, V.G.; LITVIYAKOV, P.P.; MUROMTSEV, M.N.; HERRI,
L.Ya.; YAKOBL, A.A.; BELOUSOV, R.A.; BOGOMOLOV, O.T.; POKATAYEV, Yu.N.;
ZAGLADINA, S.M.; SOBAKINSKIY, V.I.; NIKOLAYEV, D.N., red.; PONOMAREVA,
A.A., tekhn. red.

[United States is loosing the economic competition] SShA proigryvalut
ekonomicheskoe sorevnovanie. Moskva, Izd-vo ekon. lit-ry, 1961.
295 p. (MIRA 14:8)

1. Moscow. Nauchno-issledovatel'skiy ekonomicheskiy institut. 2. Sotrud-
niki Nauchno-issledovatel'skogo ekonomicheskogo instituta Gosekon-
soвета SSSR (for all except: Nikolayev, Ponomareva)
(United States--Economic conditions)
(Russia--Economic conditions)

IOFFE, Ya.A.,; NIKONOVA, I.I.; CHERTKO, V.E.; NAYDENOV, G.N.; ZIMIN,
B.N.; NOCHEVKINA, L.P.; NESTEROV, L.I.; KISTANOV, N.I.;
KUDROV, V.M.; PAK, G.V., red.; PONOMAREVA, A.A., tekhn. red.

[Structural changes in the industries of the United States,
Great Britain and German Federal Republic in the postwar
year]Strukturnye izmeneniia v promyshlennosti SShA, Anglii i
FRG v poslevoennye gody. Moskva, Ekonomizdat, 1962. 417 p.
(MIRA 15:10)

1. Moscow. Nauchno-issledovatel'skiy ekonomicheskii institut.
(United States—Industries) (Great Britain—Industries)
(Germany, West—Industries)

CHERTKO, Valentin Fedorovich; NOCHEVKINA, Luiza Petrovna; PAK, G.V.,
red.; GERASIMOVA, Ye.S., tekhn. red.

[Structure of capital investments in the industry of the
U.S.A. and the Federal Republic of Germany] Struktura pro-
myshlennykh kapitalovlozhenii SSHA i FRG. Moskva, Ekonomiz-
dat, 1963. 210 p. (MIRA 16:5)

(United States--Capital investments)
(Germany, West--Capital investments)

BOCHAROV, V.N.; DUDAYEVA, L.M.; YEVDOKIMOV, V.M.; KOLOSOV, A.F.;
KRASOVSKIY, V.P.; LUK'YANOV, E.B.; MUSATOVA, V.A.; NOVIKOV,
M.S.; SUKHOVANCHENKO, G.P.; TABELEV, V.V.; TOLKACHEV, A.S.;
CHERTKO, V.F. [deceased]; SHTANSKIY, V.A.; PAK, G.V., red.;
SELESNEVA, A.D., mlad. red.

[Structure of capital investments in the U.S.S.R. and the
U.S.A.; analysis and methods of comparison] Struktura kapi-
tal'nykh vlozhenii SSSR i SShA; analiz i metody sopostav-
leniya. Moskva, Ekonomika, 1965. 250 p. (MIRA 18:5)

1. Moscow. Nauchno-issledovatel'skiy ekonomicheskii insti-
tut.

AFANAS'YEV, N.; SIL'NOV, V., glavnyy inzh.; BACHILOV, I.; CHERTKOV, A.,
glavnyy konstruktor; SOKOLOV, Ya.; ONISKO, A.; TRUKHANOVA, A.,
tekhred.

[Trench-type silo with a capacity of 60, 90, and 150 tons (walls
lined with brick or rubble concrete)] Silosokhranilishche
transheynogo tipa emkost'iu 60, 90 i 150 tonn (steny oblitsovany
kirpichom ili butobetonom). Proekt no.004. Minsk, Gos.izd-vo
BSSR, Red.nauchno-tekhn.lit-ry, 1955. 3 p. (MIRA 12:4)

1. White Russia. Ministerstvo gorodskogo i sel'skogo stroitel'stva.
2. Direktor "Belsel'proyekta" (for Afanas'yev). 3. Rukovoditel'
masterskoy "Belsel'proyekta" (for Bachilov). 4. Ispolnyayushchiy
obyazannosti nachal'nika smetnogo sektora "Belsel'proyekta" (for
Sokolov). 5. "Belsel'proyekt" (for Sil'nov, Chertkov, Onisko).
(Silos)

AFANAS'YEV, N.; SIL'NOV, V., glavnyy inzh.; BACHILOV, I.; ~~CHERTKOV, A.,~~
glavnyy konstruktor; SOKOLOV, Ya.; KUCHINSKIY, B.; ~~TRUKHANOVA, A.,~~
tekhred.

[Trench silos with capacities of 500, 300, 200, and 100 tons (brick
and rubble concrete walls)] Silosokhranilishcha transheynogo tipa
emkost'iu 500, 300, 200 i 100 tonn (steny kirpichnye i butobetonnye).
Proekt no.001. Minsk, Gos.izd-vo BSSR, Red. nauchno-tekhn.lit-ry,
1955. 5 p. (MIRA 12:4)

1. White Russia. Ministerstvo gorodskogo i sel'skogo stroitel'stva.
2. Direktor "Belsel'proyekta" (for Afanas'yev). 3. Rukovoditel'
masterskoy No.2 "Belsel'proyekta" (for Bachilov). 4. Ispolnyayushchiy
obyazannosti nachal'nika smetnogo sektora "Belsel'proyekta" (for
Sokolov). 5. "Belsel'proyekt" (for Sil'nov, Chertkov, Kuchinskiy).
(Silos)

AFANAS'YEV, N.; SIL'NOV, V., glavnyy inzh.; BACHILOV, I.; ~~CHERTKOV, A.~~
glavnyy konstruktor; SOKOLOV, Ya.; KARAVAY, P., TRUKHANOVA, A.,
tekhred.

[Trench silo with a capacity of 1000, 700, 500, and 300 tons
(brick or rubble concrete walls)] Silosokhranilishcha transheynogo
tipa emkost'iu 1000, 700, 500, 300 tonn (steny kirpichnye ili
butobetonnye). Proekt no.002. Minsk, Gos.izd-vo BSSR, Rad. nauchno-
tekhn.lit-ry, 1955. 5 p. (MIRA 12:4)

1. White Russia. Ministerstvo gorodskogo i sel'skogo stroitel'stva.
 2. Direktor "Belsel'proyekta" (for Afanas'yev).
 3. Rukovoditel' masterskoy No.2 "Belsel'proyekta" (for Bachilov).
 4. Ispolnyayushchiy obyazannosti nachal'nika smetnogo sektora "Belsel'proyekta" (for Sokolov).
 5. "Belsel'proyekt" (for Sil'nov, Chertkov, Karavay).
- (Silos)

CHEBTKOV, A.

Factory and the school for working youth. Sov.profsoiuzy 16
no.17:27-29 S '60. (MIRA 13:8)

1. Direktor shkoly rabochey molodeshi pri zavode imeni Yanvarskogo
vosstaniya.
(Odessa--Evening and continuation schools)

CHERTKOV, A.

School and life. Sov. profsoiuzy 17 no.18:26-27 S '61.
(MIRA 14:8)

1. Direktor shkoly rabochey molodezhi, g. Odessa.
(Odessa--Evening and continuation schools)

CHERTKOV, A.

A candidate of theology breaks with religion. Sov. profsoiuzy
17 no.24:37-39 D '61. (MIRA 14:12)
(Religion)

MIKHEYEVA, V.I.; STERLYADKINA, Z.K.; CHERTKOV, A.A.

Hydrogenation of cerium alloys with aluminum. Zhur. neorg.
khim. 8 no.7:1710-1714 JI '63, (MIRA 16:7)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.
Kurnakova AN SSSR, laboratoriya khimii gidridov i bora.
(Cerium-aluminum alloys) (Hydrogenation)

L 13500-63

EWP(q)/EWT(d)/EWT(m)/BDS AFFTC/ASD JD/JG

ACCESSION NR: AP3003483

8/0078/63/008/007/1715/1721

AUTHOR: Mikheyeva, V. I.; Starlyadkina, E. K.; Chertkov, A. A.TITLE: Hydrogenation of alloys of cerium with magnesium and aluminum ²⁷ 60
59SOURCE: Zhurnal neorganicheskoy khimii, v. 8, no. 7, 1963, 1715-1721 ²⁷

TOPIC TAGS: cerium, magnesium, aluminum, hydrogenation, alloy

ABSTRACT: Authors studied the effect of aluminum on hydrogen absorption by cerium-magnesium alloys. The hydrogenation zone of Ce-Mg-Al ternary alloys was determined at ordinary temperature and hydrogen pressure somewhat lower than atmospheric. The starting materials were metallic cerium, electrolytic magnesium and metallic aluminum of 99.9% purity. Dry hydrogen was obtained by decomposing titanium hydride which did not require any additional purification. The hydrogenation of the alloys was carried out on apparatus which did not basically differ from that described by Mikheyeva and Kost (Zh. neorgan. khimii, 3, 1958, 260). The hydrogenation zone of alloys in the system Ce-Mg-Al, rich in cerium, was determined at room temperature and normal pressure. It is distributed up to 25 atomic % of aluminum and 70 atomic % of magnesium. The maximum hydrogen absorption in the zone with 5-10% aluminum and 35-60% magnesium. It was shown that alloying melts in the

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L 13500-63

ACCESSION NR: AP3003483

Ce-Mg system with aluminum increases hydrogen absorption. During maximum hydrogenation of cerium to the composition CeH sub 3 and magnesium to the composition MgH sub 2, a part of the hydrogen is absorbed on account of being involved in the aluminum hydrogenation process. The presence of aluminum (5-15%) in alloys with a total content of aluminum and magnesium above 50% sharply reduces the hydrogenation induction period and produces a reaction which is less dependent upon the purity of the hydrogen. Aluminum also effects a lowering in the temperature for decomposing the cerium dihydride from 1080° (for pure dihydride) to 1010°. Orig. art. has: 5 figures and 1 table.

ASSOCIATION: Institut obshey i neorganicheskoy khimii im. N. S. Kurnakova
(Institute of General and Inorganic Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 14Aug62

DATE ACQ: 02Aug63

ENCL: 00

SUB CODE: CH, ML

NO REF SOV: 008

OTHER: 007

Card 2/2

L 16083-65 EWT(m)/EPF(e)/ENP(b)/ENP(t) Pa-4/Pa-1 LJP(e)/RAEM(a)/ASD(a)-5/
 ASD(f)-2/ASD(m)-3 JD/JG
 ACCESSION NR: AP5001942 S/0126/64/018/002/0312/0314

AUTHOR: Malyuchkov, O. T.; Okhrimenko, Yu. Ya.; Chertkov, A. A. B

TITLE: Study of hydrides of TiV alloys by means of proton magnetic resonance (PMR)

SOURCE: Fizika metallov i metallovedeniye, v. 18, no. 2, 1964, 312-314

TOPIC TAGS: titanium base alloy, vanadium base alloy, hydride, titanium, vanadium, hydrogen, hydrogenation, magnetic resonance

Abstract: The study involved titanium and its alloys with 30, 50, and 70% vanadium (the alloys were prepared by G. S. Burkhanov at the Institute of Metallurgy imeni A. A. Baykov), which, in the form of chips, were preannealed at 400°C for 1 hr at 10^{-4} mm Hg, then hydrogenated at 400°C, and slowly cooled to room temperature. The following samples were obtained: TiH_{2.02}, TiV_{0.40}H_{2.02}, TiV_{0.50}H_{2.02}, TiV_{0.70}H_{2.02}.

H_{3.71}, TiV_{2.195}H_{4.33}, TiV_{2.195}H_{5.89}, and TiV_{2.195}H_{6.0}.

The first derived PMR curves of the hydrides consist of two lines: a narrow line (1-2 gauss) of the PMR for vanadium hydride and a broad line (15-21 gauss) of titanium hydride. The PMR signal of vanadium hydride is narrow be-

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L 16083-65
ACCESSION NR: AP5001942

cause of the diffusion of hydrogen into the hydride at room temperature; in titanium hydride, and protons have fixed positions in the lattice under these conditions.

As the concentration of vanadium in the alloy rises from 30 to 70%, the PMR line width in titanium hydride increases from 15.5 to 21.6 gauss. An increase in the hydrogen content of the alloy with 70% vanadium also causes a broadening of this line. This leads to certain assumptions on the distribution of hydrogen in the alloy. The increase in the width of the titanium hydride line, taking place in linear fashion, may be attributed to an increase in the hydrogen content of this hydride as the vanadium concentration in the alloy changes from 30 to 70%. In this case, it appears possible to make a tentative estimate of the amount of hydrogen in each of the hydrides formed by comparing the values of the second moments ($\Delta\sqrt{2}$), calculated for titanium hydrides of various H_2 contents with the experimental values of the second moments. The possible H_2 content of vanadium hydride could not be determined because of the diffusive narrowing of the PMR line.

On the other hand, the broadening of the PMR line of titanium hydride may be caused by substitution, during hydrogenation of TiV alloys, of some of the Ti atoms by V. atoms, whose nuclei have a large magnetic moment.

In order to obtain more information on the above-described phenomenon,

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L 16083-65

ACCESSION NR: AP5001942

Investigations are now being conducted into hydrides of binary alloys whose second component does not form hydrides. Orig. art. has 2 figures and 1 table.

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow Institute of Steel and Alloys)

SUBMITTED: 14Oct63

ENCL: 00

SUB CODE: MM

NO REF SOV: 002

OTHER: 000

JPRS

Card 3/3

CHERTKOV, A. K.

1A 1/49T35

USSR/Engineering
Turbines, Steam
Exhaust Systems

Jan/Feb 48

"Hydromechanical Study of the Varieties of Exhaust
Outlets of Steam Turbines," Prof M. A. Dement'yev
and A. K. Chertkov, Engr, LPI imeni M. I. Kalinin,
41 pp

"Kotloturbostroy" No 1

Gives methods employed and results of experimental
studies of hydraulic losses of outlets of turbines.
On basis of results, internal construction of outlet
nozzle was altered, which resulted in lowering
hydraulic losses by 8%.

1/49T35

DAVIDKOV, N.I.; ~~CHERTKOV~~, A.K.

Sampling of a bed by means of a countercurrent jig washer for fine-grained coal at the Cherepovets coal-cleaning plant. ~~Koks.~~ i khim. no.8:12-16 '60. (MIRA 13:8)

1. Nauchno-issledovatel'skiy institut Ugleobogashcheniye.
(Cherepovets--Coal preparation)

KURZON, Ananiy Grigor'yevich, doktor tekhn.nauk, prof.; LITAVRIN, Oleg Grigor'yevich, inzh.; PETROV, Yevgeniy Valerianovich, inzh.; POTYAYEV, Vyacheslav Andreyevich, kand. tekhn.nauk; KHOROZYANTS, Aleksandr Georgiyevich, kand. tekhn.nauk; CHERTKOV, Aleksandr L'vovich, Laureat Leninskoy premii; YUTKEVICH, Rostislav Mikhaylovich, inzh.; MOISEYEV, A.A., doktor tekhn.nauk, prof., retsenzent; MASLOV, A.A., kand. tekhn. nauk, dots., retsenzent; ZAYTSEV, Yu.I., kand. tekhn. nauk, retsenzent; KOZHEVNIKOV, A.V., kand. tekhn.nauk, retsenzent; GITEL'MAN, A.I., inzh., retsenzent; SMIRNOV, Yu.I., red.; TSAL, R.K., tekhn. red.

[Marine steam and gas turbines] Sudovye parovye i gazovye turbiny. Pod red. A.G.Kurzona. Leningrad, Sudpromgiz. Vol.2. [Systems and working principle of turbomachinery units] Sistemy i ustroistva turboagregatov. 1962. 419 p.

(MIRA 15:11)

(Marine turbines)

CHERTKOV, A. N.

Mathematics - Study and Teaching

Activities of the Odessa Methodological Association of Teachers of
Mathematics in Schools for the Working Youth, Mat. v shkole No. 1, 1955

Monthly List of Russian Accessions, Library of Congress. _____ 1953, Uncl.

BAYTAL'SKIY, M.M. (Odessa); CHERTKOV, A.N. (Odessa)

Work of the methods group of mathematics teachers in schools for
young workers in the city of Odessa. Mat.v shkole no.3:87-88
My-Je '56. (MLRA 9:8)

(Odessa--Mathematics--Study and teaching)

CHERTKOV, A.N.; BAYTAL'SKIY, M.M. (Odessa)

Work of the methodological association of teachers of
mathematics in schools for working youth of the city
of Odessa. Mat. v shkole no.2:90-91 Mr-Apr '61. (MIRA 14:4)
(Odessa--Mathematics--Methodology)

CHERTKOV, A. Ya. (Director, Veterinary Laboratory of the Republic, Kirghiz SSR).

"The application of antibiotics in animal husbandry must be widened."

Veterinariya, Vol. 38, No. 3, 1961, p. 26.

CHERTKOV, A. YA., (Director of the Rpublic Veterinary Laboratory of the
Ministry of Agriculture, Kirgiz SSR)

Fermentation equipment for biomyein preparations

Veterinariya vol. 38, no. 9, September 1961, pp. 76

CHERTKOV, A.Ya.

Fermenters for biotycin production. Veterinariia 38 no.9:
1961 S '61. (MIRA 16:8)

1. Direktor Respublikanskoy veterinarnoy laboratorii
Ministerstva sel'skogo khozyaystva Kirgizskoy SSR.

CHERTKOV, A. Ya.

Make more extensive use of antibiotics in animal husbandry. Veterinaria 38 no.3:26-28 Mr '61 (MIRA 18:1)

1. Direktor Kirgizskoy respublikanskoy veterinarnoy laboratorii.

VASILENKO, V.; CHERTOV, B.; MIKHLIN, Ye.I.; redaktor; RODCHENKO, N.I.,
tekhnicheskii redaktor.

[In Leningrad factories; a collection of articles] Na zavodakh
Leningrada; sbornik statei. Leningrad, Leningradskoe gazetno-
zhurnal'noe i kn-vo, 1956. 259 p. (MLRA 9:6)
(Leningrad--Industries)

CHERIKOV, B. A. 21

PROCESSES AND PROPERTIES

The purification of flue gases from sulfur dioxide. I. L. Prizhkov and B. A. Chetkov. *J. Chem. Ind. (U. S. S. R.)* 17, No. 10, 6-14 (1940).—The gas is passed through MgO soln., and $MgSO_4 \cdot 6H_2O$ ppt. at temps. below 60°. This is stable only below 45°, but it crystallizes from the soln. more rapidly than the trihydrate. At 900-1000° the salt regenerates SO_2 and MgO. SO_2 can also be removed from the gas by passing a mixt. of gas and air over a MnO_2 catalyst, which is more stable than $MnSO_4$. The rate of SO_2 formation is proportional to SO_2 concn. and to the gas speed.

II. M. Leicester

ASB-114 METALLURGICAL LITERATURE CLASSIFICATION

SECTION	SUBSECTION	NUMBER	DATE	REMARKS
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CHERTKOV, B. A.

USSR/Chemistry - Sulfur dioxide; Air purification

FD-960

Card 1/1 Pub. 50 - 3/19

Authors : Andriyanov, A. P., Chertkov, B. A.

Title : The ammonia circulation method of capturing sulfur dioxide from smoke gases

Periodical : Khim. prom., No 7, 394-401 (10-17), Oct-Nov 1954

Abstract : Describe in detail continuous absorption of sulfur dioxide from smoke gases by means of an ammonium sulfite solution on the basis of procedures developed by NIIOGAS and Giprogazoochistka and tried out on a plant-experimental scale at a thermal-electric power plant. In the procedure described, 100% pure sulfur dioxide is recovered by heating the resulting ammonium bisulphite solution. The ammonium sulfite is recirculated. Four references, all USSR, all since 1940. Two tables, 3 graphs.

Institution : NIIOGAZ [Scientific Research Institute of Gas Purification] and Giprogazoochistka [State Planning Institute for Gas Purification].

USSR/Processes and Equipment for Chemical Industries - Processes and Apparatus for
Chemical Technology, K-1

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 63941

Abstract: to total cross section of column was 1.4-2.4 m/sec; velocity of gas at apertures of plates 8-14 m/sec; density of downflow 1.3-3.1 m³/m² hour. It was found that: (1) with 6 plates, over-all back pressure of bubbler 150-200 mm of water column, and temperature of 30-33°, the flue gases can be freed of 90% of the SO₂ with concurrent saturation of absorbing solution; (2) occurrence of foaming on the plates depends on velocity of gas at the plate apertures W_{ap} , gas velocity over entire cross section of bubbler W_{bub} and their ratio $W_{ap}/W_{bub} = 5 \div 6$ under the conditions of the experiments; (3) correlation between SO₂ absorption rate coefficient and temperature is determined by the empirical equation $K = A \cdot t^{-0.5}$ wherein A is a constant; (4) value of K increases in direct proportion to the increase in resistance of the solution layer on the plates and decreases with decrease in chemical capacity of the solution fed onto the plate; (5) value of K in relation to unit of volume of the bubbler exceeds by 10-20 times that of a packed absorber; (6) the bubbling process almost does not increase absorption of O₂, and the degree of oxidation of the solution is by several times lower than in a packed absorber.

Card 2/2

C H E R T H O V , B . A .

CHERTKOV B.A., kandidat tekhnicheskikh nauk.

Cleaning smoke gases from flue dust in "multiwash" scrubbers
[with summary in English]. Teploenergetika 4 no.10:53-57 0 '57.
(MLRA 10:9)

1. Nauchno-issledovatel'skiy institut promyshlennoy i sanitarnoy
ochistki gazov.

(Plate towers)

✓ Dissolving sulfur dioxide in water used for washing flue gases. B. A. Chertkov, *Teplotekhnika* 4, No. 12, 61 (1957).—Physicochem. data are presented for dissolving SO_2 in scrubbers used to remove fly ash from flue gases, the equil. consts. are given of the ratio $\text{SO}_2 \cdot \text{H}_2\text{O} / \text{SO}_2$ for various partial pressures of SO_2 and flue gas and water temps., also for the reactions of $\text{Ca}(\text{HCO}_3)_2$ or $\text{Mg}(\text{HCO}_3)_2$ with SO_2 , which lead to the formation of $\text{Ca}(\text{HSO}_3)_2$ or $\text{Mg}(\text{HSO}_3)_2$, reactions which are influenced by the pH. The SO_2 can be absorbed economically if Fe and Al salts, rather than Ca or Mg, are added to the H_2O in the scrubber.

Werner Jacobson, ...

1/1

SOV/96-58-9-18/21

AUTHORS: Chertkov, B.A. (Candidate of Technical Science) and
Puklina, D.I. (Engineer)

TITLE: On Techniques for Determining the SO₂ content of Boiler
Flue Gas (K metodike opredeleniya sodержaniya SO₂ v
dymovykh gazakh kotel'nykh ustanovok)

PERIODICAL: Teploenergetika, 1958, Nr 9, pp 87 - 89 (USSR)

ABSTRACT: The most widely used method of determining the SO₂ content of flue gas is the iodometric method. It is accurate, simple and quick but can only give an instantaneous result and not a mean over an interval of time. When a mean value is required, gas samples have to be passed through reagents that react with SO₂. The object of this article is to generalise practical experience with some of the most

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On Techniques for Determining the SO₂ Content of Boiler Flue Gas

method. The practical applications of the method are then discussed. Table 1 gives results of SO₂ determinations on hot flue gas when the gas sample is drawn through the pipette for different times. The results show that although some oxidation of SO₂ can occur in the apparatus, the extent to which this occurs in the five minutes or so necessary to sweep the pipette with gas is negligible. However, the iodine should be introduced into the pipette as soon as the sample has been taken. Table 2 gives the results of SO₂ determinations on hot flue gas using an evacuated column; it will be seen that oxidation of the SO₂ has occurred. The results given in Table 3 indicate that the process of absorbing SO₂ from flue gas can also remove other acid substances. The determination of the mean concentration of SO₂ in flue gas by drawing samples through absorbing solutions is then considered. The absorbent used was potassium chlorate. The results of the determinations are compared in Table 4 and show good agreement between the iodometric and chlorate methods. Tables 5 and 6 give results of SO₂ content determinations by different methods. It is concluded that under

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On Techniques for Determining the SO₂ content of Boiler Flue Gas

practical conditions the iodometric method of determining SO₂ content is a simple and reliable way of obtaining instantaneous values. However, the accuracy of the analysis is influenced by a number of side effects, and when more accurate determinations of the mean SO₂ content over a period of time are required it is advisable to draw gas samples through absorbents. The reagents used may be iodine, chlorate, hydrogen peroxide, alkalis and others. The higher accuracy of this analysis is relevant to the need for more detailed study of the flue gas composition and the presence in it of other acid substances besides SO₂.

There are 6 tables, 12 literature references (6 English, 6 Soviet)

1. Sulfur dioxide--Determination
2. Waste gases--Analysis
3. Boilers--Operation

Card 3/3

CHERTKOV, B. R.
VASILENKO, V.Ye.; NEPOMNYASHCHIY, A.S.; SLIVKER, I.S.; CHERTKOV, B.A.;
GRAMMATIKOV, V.A., red.; LEVONEVSKAYA, L.G., tekhn.red.

[This will happen in Leningrad] Eto budet v Leningrade. [Leningrad]
Lenizdat, 1958. 232 p. (MIRA 11:5)
(Leningrad--Description)

14(10) 24(8)

AUTHOR: Chertkov, B. A.

SOV/64-58-8-9/19

TITLE: Heat Transfer Coefficients in Cooling Flue Gases in Packed Scrubbers (Koeffitsiyenty teploperedachi pri okhlazhdenii dymovykh gazov v nasadochnykh skrubberakh)

PERIODICAL: Khimicheskaya promyshlennost', 1958, Nr 8, pp 487 - 491 (USSR)

ABSTRACT: The scrubbers referred to are, inter alia, used for cooling flue gases of large boiler plants prior to removing the SO_2 gas by the ammonia method (Ref 1). Since these scrubbers are required to be very big and because of their cost it is necessary to maintain optimum conditions of heat transfer to make them economical. Practical data regarding the cooling of fumes in scrubbers of various dimensions are given. In the tests referred to the moisture content of the fumes amounted to 90-110 g/N sq. m of dry gas, the partial pressure of water vapor being 75 - 90 torr, i.e. the dew point was 46 - 50°. It was interesting to compare the heat transfer coefficients obtained (Table 2) in the different scrubbers at the same linear speed of the gas (W_0)

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Heat Transfer Coefficients in the Cooling of Fumes
in Packed Scrubbers

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and wetting density (Q). A study of the coefficient β of the mass loss and the coefficient α of the heat loss through convection showed (Table 3) that α and β increase steadily as the linear speed of the gas (W_0) in the scrubber increases, but that the relation between them remains constant, which suggests an analogy of the processes of heat and water exchange in the scrubber. The results obtained in the tests performed with four scrubbers are given (Table 2) and some theoretical considerations in connection with the criterion of Kirpichev, Reynolds (Reynol'ds), and Prandtl are added. Data furnished by L. D. Berman (Ref 5) and N. M. Zhavoronkov (Ref 4) are given; an equation for the heat transfer processes in packed scrubbers at wetting densities up to 12 cu.m./sq.m./h is also added. According to the data given it can be assumed, in the case of an initial temperature ranging from 100 to 170° and a dew point of the **gases** of 46 - 50°, that the heat transfer process takes place in one stage.

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Heat Transfer Coefficients in the Cooling of Fumes
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There are 2 figures, 3 tables and 7 Soviet references.

ASSOCIATION: NIIOGAZ

Card 3/3

AUTHOR: Chertkov, B. A., Candidate of Technical Sciences SOV/68-59-1-14/26
TITLE: Processing of Ammonium Sulphite-bisulphite Solutions to Ammonium Sulphate and Elementary Sulphur (Pererabotka rastvorov sul'fit-bisul'fita ammoniya na sul'fat ammoniya i elementarnuyu seru)
PERIODICAL: Koks i Khimiya, 1959, Nr 1, pp 48 - 53 (USSR)
ABSTRACT: Kinetics of decomposition of ammonium sulphite-bisulphite solutions into ammonium sulphate and elementary sulphur in the absence and presence of a catalyst (sulphur) was investigated. Disadvantages of periodic (batch) method of decomposition of the solution in an autoclave were shown (pressure operation and low throughput capacity) and a scheme for continuous decomposition of the solution at a pressure not exceeding 5 atm and a temperature within the range of 152-163 °C was proposed (Figure 2). The scheme requires a simple plant, and is characterised by high productivity and safety in operation. It was proved in laboratory experiments that the decomposition of ammonium sulphite-bisulphite solutions into ammonium sulphate and elementary sulphur can be attained in technical acceptable time (2.5 hours) in an open apparatus under normal pressure. For this purpose, it is necessary that during

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SOV/68-59-1-14/26

Processing of Ammonium Sulphite-bisulphite Solutions to Ammonium Sulphate and Elementary Sulphur

the first stage of the process (formation of thiosulphate) the solution was intensively stirred with a large excess of sulphur on heating to a temperature 100 - 105 °C in order to increase the velocity of formation of the intermediate product - ammonium thiosulphate. When the necessary concentration of thiosulphate is attained, the solution should be acidified (with H_2SO_4 or SO_2) in order to transfer the residual sulphite into bisulphite and completion of the decomposition reaction. The passage of decomposition under the above conditions is shown in Figure 5. On the basis of the results obtained, the method is recommended for an industrial testing. There are 5 figures, 1 table and 9 references, 6 of which Soviet and 3 German.

ASSOCIATION: NIIIOGAZ

Card 2/2

AUTHOR: Chertkov, B.A. SOV/80-59-1-13/41

TITLE: Effect of Temperature and Partial Pressure of Oxygen in a Gas on the Rate of Oxidation of Ammonium Sulfite-Bisulfite Solutions (Vliyaniye temperatury i partial'nogo davleniya kisloroda v gaze na skorost' okisleniya rastvorov sul'fit-bisul'fita ammoniya)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Nr 1, pp 78-85 (USSR)

ABSTRACT: The author describes the results of experiments, in which participated also D.L. Puklina, T.I. Pekareva, and T.T. Spiridonova, on the effect of temperature and partial pressure of oxygen in a gas being purified on the rate of oxidation of the sulfite-bisulfite solution. The former effect, of temperature, was studied by the statical method, and that of oxygen concentration by the dynamical method. The oxidation rate was determined by the increase in the amount of ammonium sulfate in the solution and it was re-computed into its equivalent, the rate of oxygen absorption GO_2 (in g/m²hour). As a result of this study an empirical relation was obtained which makes it possible to determine the rate of solution oxidation at any temperature, if the rate of oxidation of this solution is known at some particular temperature. It was established that the rise of oxygen partial pressure in a gas furthers the effect of solution oxidation. However, the increase in

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SOV/80-59-1-13/44

Effect of Temperature and Partial Pressure of Oxygen in a Gas on the Rate of
Oxidation of Ammonium Sulfite-Bisulfite Solutions

the concentration of ammonium sulfate depends on the fact
whether the oxidation process is controlled by the input of
oxygen into the liquid phase or by the rate of the chemical
reaction between the sulfite-bisulfite and dissolved oxygen.
There are 3 tables, 2 graphs and 7 references, 5 of which are
Soviet and 2 German.

SUBMITTED: June 17, 1957

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5(1)

AUTHOR:

Chertkov, B. A.

SOV/64-59-5-13/28

TITLE:

Separation of SO_2 in Fumes by Bubble-column Absorbers

PERIODICAL:

Khimicheskaya promyshlennost', 1959, Nr 5, pp 413-417 (USSR)

ABSTRACT:

The suitability to absorb SO_2 in fumes by the aid of foams in an adequate absorber was already pointed out by testing an absorber that was furnished with six grid-like bottoms (Ref 2). To work out this method a test-absorber with a capacity up to $10,000 \text{ m}^3$ fume/hour (containing 0.2-0.4 vol % SO_2) was installed on the sulphur-collecting plant of the TETs (Thermoelectric Power Center) in Moscow according to the project of the Institut Giprogazoochistka (Institute of Water Gas Purification). A. G. Aaronov and G. Ye. Aristov participated in the investigations. The size of the absorber (Fig 1) was $1,500 \times 700 \times 5,000 \text{ mm}$, the construction material was aluminum AD-1. Absorption took place in a fluid mixture consisting of ammonium bisulfite (75%) and ammonium sulfite (25%). Data on the grid-like bottoms (number, grid spacing etc.) which were used in the different

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Separation of SO_2 in Fumes by Bubble-column Absorbers SOV/64-59-5-13/28

test stages, are listed in table 1, the characteristic values for hydrodynamic conditions may be seen in table 2, table 3 shows the efficiency of SO_2 absorption during different work conditions and table 4 the change of the absorption coefficient for diminution of the chemical capacity of the absorbing solution. The total hydraulic resistance of a grid-like bottom was 35 mm water column for a linear flow velocity of the gas of 1.5-2 m/sec (of the total cross section of the absorber), and amounted to 200-220 mm water column for the complete absorber. For optimum conditions the mean absorption coefficient of SO_2 was 21 kg $\text{SO}_2/\text{m}^3 \cdot \text{hour} \cdot \text{torr}$, an amount, that is about 13 times greater than that of the coefficient in packed columns. The volatile brine content in fumes is mainly detained already by the second or third grid-like bottom, so that the work fluid is not soiled (in case the primary cooling of fumes took place in absorbers of the described type). The oxidation of SO_2 in bubble-column absorbers is 4-5 times less than in packed columns under the same conditions. The described absorber is recommended to separate SO_2 in fumes for industrial purposes, on the basis

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Separation of SO_2 in Fumes by Bubble-column Absorbers SOV/64-59-5-13/28

of experimental results. I. N. Kuz'minykh is mentioned in the paper under review. There are 2 figures, 4 tables, and 7 Soviet references.

ASSOCIATION: NIIOGAZ

Card 3/3

SOV/96-59-8-16/27

AUTHOR: Chertkov, B.A., Candidate of Technical Sciences

TITLE: The Effectiveness of a Foam Bubbling Equipment in Removing
Light Ashes from Flue Gases

PERIODICAL: Teploenergetika 1959, Nr 8, pp 58-62 (USSR)

ABSTRACT: The construction and operating principles of single-shelf foam bubbling equipment for removing fly ash from the flue gases of large boilers have been described in previous publications. There is now some experience of the use of such equipment. The present tests were made on flue gas obtained during pulverised combustion of Moscow Basin coal in a boiler with an output of up to 200 tons per hour. When the tests were made the dry ash-arresters were working badly and the concentration of fly ash was as high as 5 - 8 g/m³. Table 1 gives data on the hydro-dynamic conditions of operation of the foam bubbling equipment and on its effectiveness in removing ash. It will be seen that with a 4-shelf foam bubbling equipment the fly-ash content of the gas may be reduced to 0.1 g/m³ from an initial concentration of 6 - 6.5 g/m³. Such a result cannot be achieved

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The Effectiveness of a Foam Bubbling Equipment in Removing Light Ashes from Flue Gases

in scrubbers and can be obtained only with difficulty in electro-static precipitators. When the conditions are right the efficiency lies between 97.5 and 98.8%, and a reduction to 95.5% is observed only when the rate of flow of gas through the apparatus is low. At low gas speeds, of the order of 1.4 m/sec, little foam was formed and the washing was less effective. For the better characterisation of the foam bubbling equipment as an ash remover, a coefficient of rate of ash removal B was introduced. It is given by expression (1) and characterises the amount of ash trapped per unit surface and per unit time, with allowance for changes in the concentration of ash in the gas during the process of purification. This coefficient B does not have a constant value over the height of the apparatus, for as the larger particles are trapped the smaller become more difficult to retain. The most important relationship is that between B and the mean linear gas speed in the equipment. This relationship is plotted in logarithmic coordinates in Fig 1 and may be expressed by the empirical formula (2). It would appear from this

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The Effectiveness of a Foam Bubbling Equipment in Removing Light Ashes
from Flue Gases

formula that the higher the gas speed the better, but in fact the gas speed is limited by the hydro-dynamic resistance. When tested at a linear gas speed of 3 m/sec., the total resistance of the four grids in the equipment was around 160 mm water. An analysis was also made of the effectiveness of each grid. The results are tabulated in Table 2, from which it will be seen that most of the ash is trapped in the first and second grids; the third and fourth grids, which have to handle the remaining fine particles, trap much less. In these particular tests the first grid trapped 82.2%, the second 12.65%, the third 3.45% and the fourth 1.70%. These values apply, of course, only to the particular fly ash used in the tests, but the general picture will probably be the same with other types of fly ash. However, in the particular case considered four trays were necessary to cool the gas effectively. An idea of the particle size distribution of the fly ash trapped in the foam bubbling equipment may be obtained from the data given in Table 3, which shows that the ash was very fine, being mostly of particles less

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The Effectiveness of a Foam Bubbling Equipment in Removing Light Ashes
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than 10 microns. The table also includes particle size information on deposits from the fan, which give some idea of the composition of ash not trapped by the foam bubbling equipment. Here, most of the ash is smaller than 6 microns. The value of B, the coefficient given in expression (1), may be calculated from data given for the maximum gas speed and the grid area, and the results are given in Table 4, for each of the four grids. A comparison was made between the foam bubbling equipment and a scrubber in respect of efficiency of ash removal, and the results which are given show that the foam equipment was eleven times more effective than the scrubbers. Questions of sulphur dioxide absorption by the washing water and corrosion effects are then considered. Differences between the sulphur dioxide contents of the water in the different trays is explained. In the foam bubbling apparatus the water is not in contact with the sulphur dioxide for so long as in the scrubber. Consequently the sulphur dioxide content of the water discharged is less, which is convenient. The water spray carried away by the gas flow was arrested by wooden screens and the

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SOV/96-59-8-16/27

The Effectiveness of a Foam Bubbling Equipment in Removing Light Ashes from Flue Gases

carry-over from the foam bubbling equipment was relatively small. The experimental model used was made of aluminium in the hope that it would adequately resist the corrosive action of wet sulphur dioxide. Corrosion was observed in the lower part of the apparatus, where the gas and water are hottest, and it is concluded that aluminium can be recommended only for the construction of the upper part of the equipment. A more resistant metal or a protective coating should be used for the lower part. This particularly affects the first grid in the path of the gas, which is subject to erosion by fly ash in the gas. No unwelcome deposits of ash accumulated in the foam bubbling equipment during operation. There are 2 figures, 5 tables and 4 Soviet references.

ASSOCIATION: NIIOGAZ

Card 5/5

CHERTKOV, B.A.

Effect of the SO_2 concentration in a gas on absorption rate of
 SO_2 in different solutions. Khim.prom. no.7:586-591 O-N '59.
(MIRA 13:5)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut promyshlennoy
i sanitarnoy ochistiki gazov.
(Sulfur dioxide) (Absorption)

5(2)

SOV/80-32-5-3/52

AUTHOR: Chertkov, B.A.

TITLE: The Application of n-Phenylene-Diamine as an Oxidation Inhibitor of Ammonium Sulfite-Bisulfite Solutions

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 5, pp 952-960 (USSR)

ABSTRACT: In the cyclic ammonia method of SO₂ elimination from smoke gases 0.1% of technical n-phenylene diamine is added to the operating solution to reduce its oxidation. The choice of this substance is based on the work of Zil'berman and Ivanov [Ref 3]. Laboratory investigations of S.M. Golyand, T.K. Krapivina and R.A. Berdyanskaya in the NIIOGAZ and of T.D. Averbukh and N.P. Bakina in the UNIKhIM have shown that ash particles do not adsorb the inhibitor, but show a contradictory catalytic effect. The inhibitor reduces the oxidation rate 4-5 times. An addition of 3, 2, 1 or 0.5 g/l has nearly the same effect. At a S/C ratio of 0.91 the oxidation rate is higher, but the inhibiting effect is still strong. The content of 0.25 mole/l of thiosulfate in the solution increases the oxidation rate, but the inhibitor has a noticeable effect even at minimum concentration. A quantity of 3.2 g/l shows an inhibiting effect for

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The Application of n-Phenylene-Diamine as an Oxidation Inhibitor of Ammonium Sulfit-Bisulfite Solutions

2,000 hours. This effect is not impaired by periodical changes of temperature or by the hydrodynamic conditions of the process. It is assumed, however, that the ash particles with their developed surface activate the positive catalytic action of admixtures which are always present in the solution in the form of traces. The effect of the inhibitor is therefore reduced. The inhibitor must be supplied continuously to the solution to make up for losses. In 53 days of continuous operation more than half of the inhibitor is lost. Only in the initial stages of the process the inhibitor shows 100% of its potential effect. Later on 60% of it are in its active state and 40% in the inactive state.

There are: 8 graphs, 3 tables and 8 Soviet references.

SUBMITTED: October 3, 1957

Card 2/2

5(2)

SOV/80-32-5-4/52

AUTHOR: Chertkov, B.A.TITLE: The Oxidation of Solutions of Ammonium Sulfite-Bisulfite in the Process of SO₂ Extraction From Smoke Gases

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 5, pp 960-965 (USSR)

ABSTRACT: The effect of various factors on the rate of oxidation of ammonium sulfite-bisulfite has been considered in [Refs 1-3]. The experimental data is compared here with industrial conditions. The product of oxidation is (NH₄)₂SO₄ which is used as a fertilizer. The oxidation of the operation solution proceeded evenly so that the average rate of ammonium sulfate formation was a constant. At the first periods of operation the oxidation was very intense and the oxygen absorption reached 1.1 g/m².hr. This is explained by the higher temperature of the solution in the absorber. At later stages the oxidation decreased with the temperature, although the content of thiosulfate increased noticeably. The average rate of oxygen adsorption in most production stages was 0.75 g/m².hr. A change of the SO₂ content in the gas affects the composition of the solution. The density of irrigation of the absorber reduced the resistance of

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SOV/80-32-5-4/52

The Oxidation of Solutions of Ammonium Sulfite-Bisulfite in the Process of SO_2
Extraction From Smoke Gases

the liquid film and should increase the transition of oxygen from the boundary layer to the liquid. Since the gradient of concentration of oxygen is very low, the density of irrigation has only a slight effect. An increase of the summary and effective concentrations of NH_3 reduces the oxidation rate, because oxygen is less soluble in a more concentrated solution. An increase of the temperature has an accelerating effect. It has been established that a bubbling absorber operating under foaming conditions is more advantageous than a packed absorber.

There are: 1 graph, 1 table and 7 Soviet references.

SUBMITTED: May 3, 1957

Card 2/2

CHERTKOV, B.A.

Effect of the absorbent composition on the rate of
absorption of SO_2 from gases. Khim.prom. no.3:

223-227 Ap-My '60. (MIRA 13:8)
(Sulfur dioxide) (Mass transfer)
(Absorption)

CHESTKOV, B.A., kand.tekhn.nauk

Effectiveness of the cooling of smoke gases with water in a
four-stage foam apparatus. Teploenergetika 7 no.5:55-60 My
'60. (MIRA 13:8)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut promy-
shlennoy i sanitarnoy ochistki gazov. (Foam)
(Smoke prevention)

CHERTKOV, B.A., kand.tekhn.nauk

Production of ammonium sulfate from the ammonia of coke-oven gas.
Koks i khim, no.9:44-46 '60. (MIRA 13:9)

1. Nauchnyy institut po udobreniyam i insektofungitsdam im. Ya.V.
Samoylova.

(Ammonium sulfate) (Ammonia)

5.1105

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SOV/80-33-1-2/49

AUTHORS: Chertkov, B. A., Puklina, D. L.

TITLE: Effect of Temperature Upon the Rate of SO_2 Absorption From Gases

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, No 1, pp 9-15 (USSR)

ABSTRACT: Effect of temperature upon the mass-transfer coefficient (K) in absorption of SO_2 by various absorbents was measured experimentally. The absorbents were solutions of ammonium sulfite-bisulfite with the ratio SO_2/NH_3 _{eff} equal to 0.810 and 0.936, which correspond to regenerated and saturated solutions, respectively, in the cyclic process for enrichment of ammonia solutions by SO_2 ; and NaOH and Na_2CO_3 solutions whose activity was equal to that of regenerated solution of ammonium sulfite-bisulfite. Absorption tube (d = 1.2 cm; h = 106 cm) with

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irrigated walls was used in all experiments, the only variable factor being the temperature of the absorbing solution. Figure 1 gives a graphical representation of the results. In all cases the mass-transfer coefficient decreases with increasing temperature. But, while absorption of SO₂ by the solutions of NaOH and Na₂CO₃ is only weakly influenced by the temperature (and is identical for both solutions), the ammonium sulfite-bisulfite solutions show well-pronounced absorption-temperature dependence, which increases with increasing concentration of SO₂ in solution. The reason for this difference lies in: (1) sharp increase of equilibrium vapor pressure of SO₂ with increase in temperature and, consequently, decrease of K; and (2) ammonium sulfite-bisulfite solutions' decrease of Henry coefficient, H, in Eq. (1)

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$$\frac{1}{K} = \frac{1}{K_{gas}} + \frac{1}{H K_{liquid}} \quad (1)$$

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(where K is mass-transfer coefficient; k_g , k_{lq} are partial absorption coefficients in gas and in liquid film, respectively; H is Henry coefficient, which is inversely proportional to the temperature; β is "chemical parameter" [Ramm, V. M. "Absorption Process in Chemical Industry" (Absorbtsionnye protsessy v khimicheskoy promyshlennosti), Goskhimizdat (1951)]) with increasing temperature is much sharper than increase of β and k_{lq} (with possible decrease of k_g), while in solutions of sodium hydroxide and carbonate the decrease in H is probably compensated by increase in values of β and k_{lq} . Results of this study indicate that in using alkaline absorbents, the temperature can be changed without altering the volume of absorption apparatus or the packing, while, in the case of sulfite-bisulfite solutions, increase of temperature calls for considerable changes in absorption surface. There is 1 figure; 1 table; and 7 Soviet references.

SUBMITTED:
Card 4/4

April 22, 1959

CHERTKOV, B.A.

Oxidation of calcium sulfite in the process of extracting SO_2 from
gases. Zhur. prikl. khim. 33 no.8:1708-1714 Ag '60. (MIRA 13:9)
(Calcium sulfite) (Sulfur dioxide)

CHERTKOV, B.A.

Coefficients of mass transfer in the course of the absorption
of SO in a multistage absorber. Khim. prom. no. 7:559-562
O-N '60. (MIRA 13:12)
(Sulfur dioxide) (Absorption) (Mass transfer)

CHERTKOV, B.A.

Oxidation of magnesium sulfite and bisulfite in the process of SO₂ extraction from gases. Zhur.prikl.khim. 33 no.10:2165-2172 0 '60.
(MIRA 14;5)

(Sulfur dioxide) (Magnesium sulfite)

CHERTKOV, B.A.; PEKAREVA, T.I.

Density and viscosity of aqueous solutions of $(\text{NH}_4)_2\text{SO}_3$, NH_4HSO_3 ,
and $(\text{NH}_4)_2\text{SO}_4$. Zhur. prikl. khim. 34 no.1:143-150 ²Ja³61.4 ³
(MIRA 14:1)

(Ammonium sulfite)

CHERTKOV, B.A.

Special consideration should be given to the problems involving
the utilization of flue sulfur dioxide and atmospheric pollution
control. Khim.prom. no.5:336-338 My '62. (MIRA 15:7)
(Sulfur dioxide) (Air--Pollution)

CHERTKOV, B.A.

Mass transfer coefficients in the absorption of SO₂ from gases
with lime suspensions. Khim.prom. no.7:533-536 J1 '62.
(MIRA 15:9)
(Sulfur dioxide) (Absorption) (Mass transfer)

CHERTKOV, B.A.; VASIL'YEV, B.T.; DOBROMYSLOVA, N.S.

Increasing the stability of ammonium bisulfite used in the production
of caprolactam. Khim.prom. no.9:633-634 S '62. (MIRA 15:11)
(Ammonium sulfite) (Azepinone)

CHERTKOV, B.A.

Mass transfer coefficients during absorption of sulfur dioxide
from gases by solutions of magnesium sulfite - -magnesium bi-
sulfite. Khim. prom. no.7:537-541 J1 '63. (MIRA 16:11)

VOLKIND, I.Ya.; CHERTKOV, B.A.

Bibliography. Zhur. prikl. khim. 36 no.5:1165-1168 My '63.
(MIRA 16:8)
(Phosphorus compounds) (Chemical apparatus)

CHERTKOV, B.A.; VASIL'YEV, B.T.; REPENKOVA, T.G.; BOGUSLAVSKAYA, R.I.; DOBRO-
MYSLOVA, N.S.

Obtaining 100 per cent sulfur dioxide for the production of sodium
hydrosulfite. Khim.prom. no.1:49-52 Ja '64. (MIRA 17:2)

CHERTKOV, B.A.

· Ammonium bisulfite as a source for obtaining 100 per cent sulfur
dioxide. Khim.prom. no.1:44-49 Ja '64. (MIRA 17:2)

CHERTKOV, B.A.; DOBROMYSLOVA, N.S.

Effect of sulfete impurities on the partial pressure of SO_2
over ammonium sulfite-bisulfite solutions. Zhur. prikl. khim.
37 no.8:1718-1723 Ag '64. (MIRA 17:11)

CHERTKOV, B.A.

Mass transfer coefficients of sulfur dioxide absorption from
gases by ammonium sulfite bisulfite solutions. Zhur. prikl.
khim. 37 no.11:2437-2445 N '64 (MIRA 18:1)

CHERTKOV, B.A.; DOBROMYSLOVA, N.S.

Physical properties of ammonium bisulfite solutions and their use in
production control. Zhur. prikl. khim. 38 no.7:1456-1463 J1 '65.
(MIRA 18:7)

CHERTKOV, B.A.; RAMM, V.M.; DOBROMYSLOVA, N.S.

Absorption of NH_3 by water and sulfuric acid. Zhur.prikl.khím.
38 no.9:1972-1980 3 465.

Absorption of SO_2 by sulfuric acid monohydrate. Ibid.:1980-
1987 (MIRA 38:30)

CHERTKOV, B.A.; RAMM, V.M.; DOBROMYSLOVA, N.S.

Absorption of sulfur trioxide by oleum. Zhur. prikl. khim.
38 no. 10:2330-2332 0 '65. (MIRA 18:12)

1. Submitted August 5, 1963.

I 24728-66

ACC NR: AP6005400

(A)

SOURCE CODE: UR/0323/65/000/005/0003/0009

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B

AUTHOR: Poznyakov, Yu. I. (Engineer); Yesin, V. A. (Candidate of technical sciences); Ovchinnikov, S. I. (Candidate of technical sciences); Chertkov, B. S. (Engineer)

ORG: [Poznyakov; Yesin] Moscow Technological Institute of Light Industry (Moskovskiy tekhnologicheskii institut legkoy promyshlennosti); [Ovchinnikov] All-Union correspondence Institute of Textiles and Light Industry (Vsesoyuznyy institut tekstil'noy i legkoy promyshlennosti); [Chertkov] Lvov Company "Progress" (L'vovskaya firma "Progress")

TITLE: Organizational and technical development of footwear production and industrial structure of a factory

SOURCE: IVUZ. Tekhnologiya legkoy promyshlennosti, no. 5, 1965, 3-9

TOPIC TAGS: industrial production, industrial plant, footwear

ABSTRACT: This article deals with the structure and production of a footwear factory. The production structure of a footwear factory must be at the level of organizational and technical development of production. Reorganization of the production structure of footwear factories must be carried out on the level of the improvement of technical procedures, technology, and organization of production. [MT]

SUB CODE: 11/ SUBM DATE: 16Apr65/ ORIG REF: 007/

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CHERTKOV, B.S.

New forms of the public inspection of production quality.
Kozh.-obuv.prom. 5 no.10:11-12 0 '63. (MIRA 17:4)

1. Zamestitel' glavnogo inzhenera obuvnoy firmy "Progress".

IL'CHENKO, A.I., inzh.; KRASILOVSKIY, L.S., inzh.; LISOVTSSEV, P.A., inzh.;
MAKARENKO, S.F., inzh.; STOYANCHENKO, S.I., inzh.; SUMTSOV, V.F.,
inzh.; CHERTKOV, D.S., inzh.

Investigating the strength of the magnetic field of suspended
electromagnetic separators. Ugol.prom. no.5:46-50 S-0 '62.
(MIRA 15:11)

1. Mashinostroitel'nyy zavod im. Parkhomenko.
(Magnetolectric machines—Testing)

CHERTKOV, G. V.

Technology of metals. Moscow, ONTI, 1957. 579 p.

1. Metal-vert. 2. Metals.

SOV/137-57-6-10896

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 6, p 214 (USSR)

AUTHOR: Chertkov, G.V.

TITLE: The Influence of the Scale Factor and the Configuration of Iron Castings on Their Brittle-strength Characteristics (Vliyaniye masshtabnogo faktora i konfiguratsii chugunnykh otlivok na ikh kharakteristiki khrupkoy prochnosti)

PERIODICAL: Tr. Vses. zauch. leso-tekhn. in-ta, 1955, Nr 1, pp 59-72

ABSTRACT: Determinations are made of the influence of size (massiveness), and the configuration of iron castings and the speeds at which they are cooled, upon their mechanical properties. It is shown that statistical theories of brittle strength that do not allow for a structural factor dependent upon cooling speed cannot yield satisfactory results when applied to cast iron. Use of a correlation equation makes it possible to calculate σ_b with accuracy adequate for practical purposes for any diameter ≥ 25 mm of this iron. A formula is derived to express the influence of the shape of the cross section of the specimen upon the value of σ_{bi} .

Card 1/1

Yu.R.

CHERTKOV, G. V.

CHERTKOV, G. V., Cand. Tech. Sci., "The Effect of the Rate of Cooling of Iron Castings on the Structure and Brittle-Strength Characteristics of Metal," p. 327 in book Solidification of Metals, Trans. of 2nd Conf. on Theory of Foundry Processes, '56; Moscow, Mashgiz, 1958, 532pp.

CHERTKOV, G.V.

Characteristics of the brittle strength of cast iron. Trudy LTA
no.83:111-133 '59. (MIRA 13:4)
(Cast iron) (Metals--Brittleness)

GHERTKOV, G.V.

Effect of the dimensions of cast iron specimens on their mechanical properties. Zav.lab. 27 no.3:321--323 1961. (MIRA 14:3)

1. Leningradskaya lesotekhnicheskaya akademiya im. S.M. Kirova.
(Cast iron—Testing)

CHERTKOV, G.V.

Relation between the characteristics of static and cyclic strength of cast iron under various kinds of loading. Zav.lab. 29 no.2: 202-205 '63. (MIRA 16:5)

1. Leningradskiy lesotekhnicheskaya akademiya imeni S.M.Kirova.
(Cast iron--Testing)

CHURANOV, S., prepedavatel'; KHODAKOV, Yu., prof.; CHERTKOV, I.,
prepedavatel' khimii

Problems and experiments in chemistry. Nauka i shizn' 30 no.4:
98 Ap '63. (MIRA 16:7)

1. Moskovskiy gosudarstvennyy universitet (for Churanov).
2. Kafedra khimii Moskovskogo aviatsionnogo ordena Lenina
instituta im. Serge Ordzhonikidze (for Khodakov).
3. Nauchno-
issledovatel'skiy institut obshchege i politekhnicheskogo
obrazovaniya Akademii pedagogicheskikh nauk RSFSR (for Chertkov).
(Chemistry—Problems, exercises, etc.)

CHERTKOV, I. L., GROBOVITSKIY, Ye. B. and KIVMAN, G. Ya.

"Apparatus for the Graphic Recording of Changes in the Lumen of Blood Vessels during Physiological Experiment." Farmakol i Toksikol, No. 2, p 57, 1951.

CHERTKOV, I.L.

"Reactivity of the Smooth Muscles of Intestines to Spasmolytic Substances in a Case of Experimental Cholesterin Arteriosclerosis." Thesis for degree of Cand. Medical Sci. Sub 13 Nov 50, First Moscow Order of Lenin Medical Inst.

Summary 71, 4 Sep 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1950. From Vechernyaya Moskva, Jan-Dec 1950